

# Bees in North America

The Whirlwind Tour









Bees are Vegetarian Wasps





20,000 Named Species Worldwide





20,000 More to Describe





~4,000 Species in U.S.





~ 400 Undescribed in U.S.





Diversity Highest in the Southwest



100+ Species at Any Location





Overlapping Populations



Honey Bees are from Mars





20% of Species are Nest Parasites



1% of Bees are Not Native



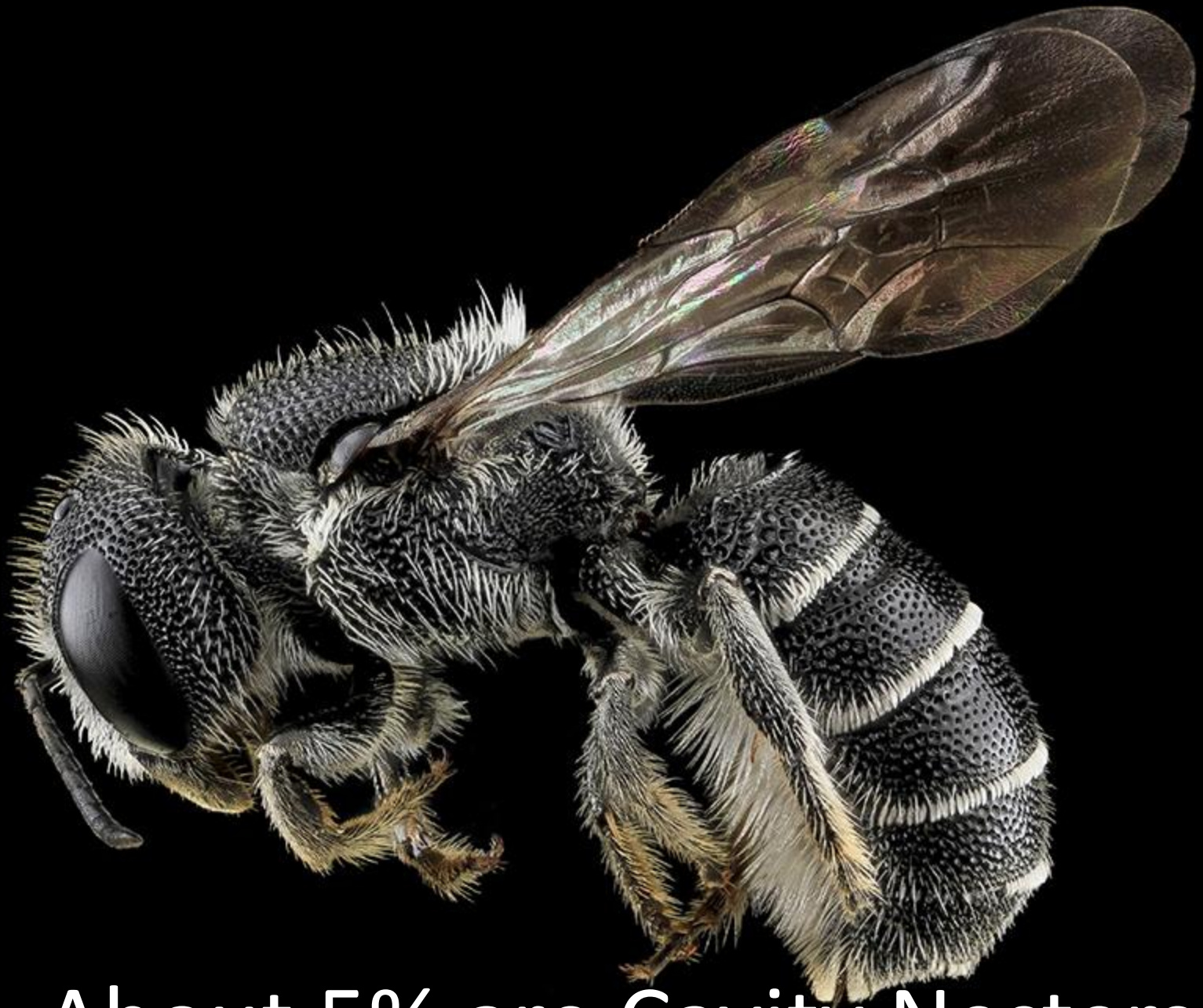


20-25% of Bees are Pollen Specialists



Squash and Sunflowers have  
Specialist Bees





About 5% are Cavity Nesters



Hole Nesting Species Can Be  
Directly Manipulated





Most Nest in the Ground



Carries Pollen Internally





Carries Pollen Under Abdomen

Males Do Transfer Pollen When  
Nectaring, Do Not Help at Nests







Bees Must Know the Right Song





Most Native Bees Do Not/Can  
Not Sting





Native Bees at Times can Provide  
the Bulk of Crop Pollination





Bees Are Good at Finding  
Blooming Plants





Woodland Habitats = Orchard Bees





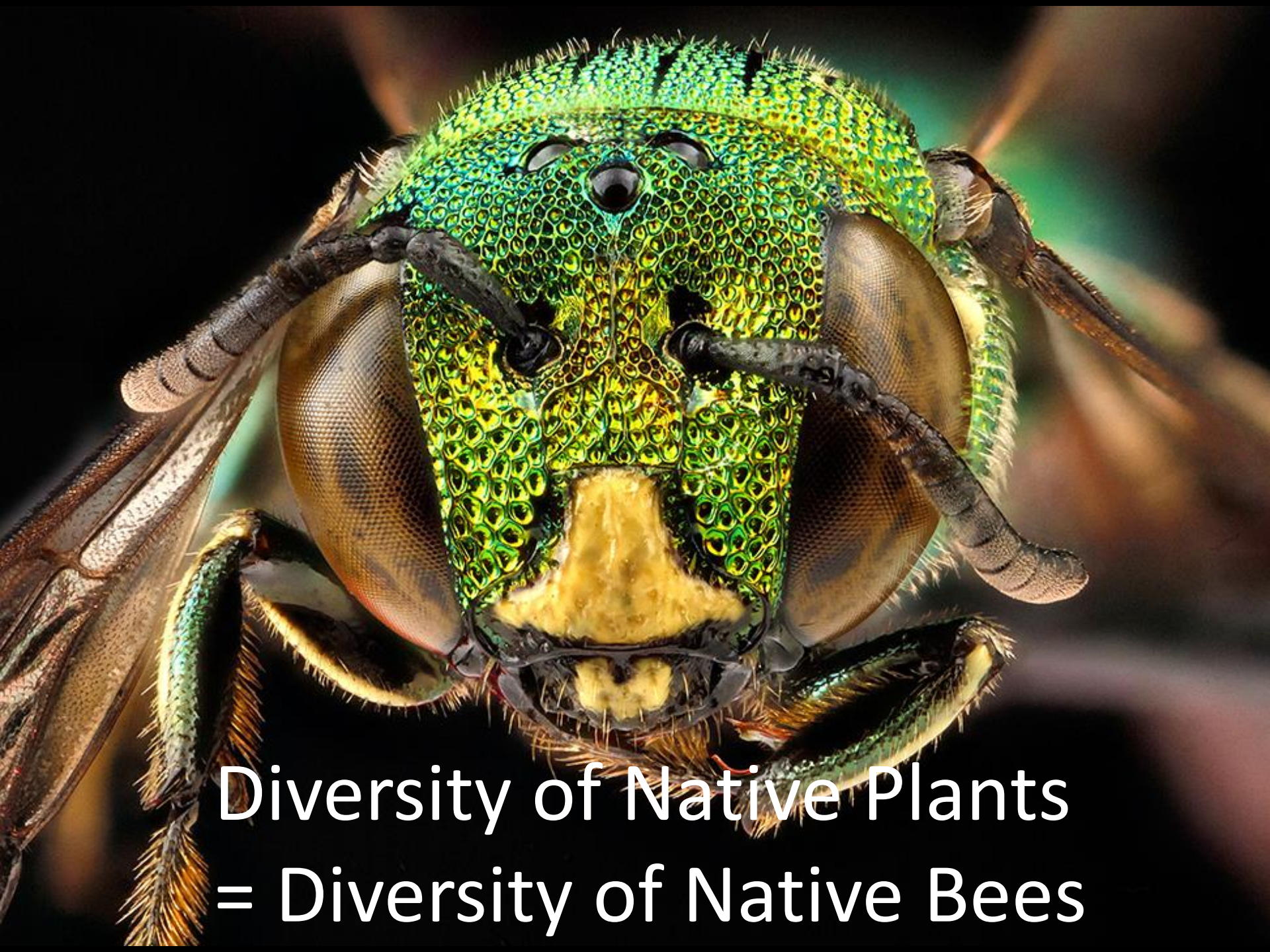
Row Crops = Native Bee Sink





Soybean Yield Boost





Diversity of Native Plants  
= Diversity of Native Bees



# Interdigitating Native Habitat With Orchard/Cropland







Habitat Management for Ag Sites





Native Bee Decline = Habitat Loss



Status of Most Native Bees is  
**Unknown**



Native Bees  
Retained by  
Quality Native  
Habitat





East of the 100<sup>th</sup> = Loss of  
Open Country Species





49 Bumble Bee Species



Eastern Bumble Bee Greenhouse  
Orchard Production





Loss of Bumble Bees due to  
Introduced European Parasites



Loss of Meadowland/  
Diverse Plant Assemblages





Overplanting Trees



Herbiciding and Mowing of  
Roadsides/ ROW





Sand and Gravel Mine Restoration

# Xerces Society





# Soft Edges

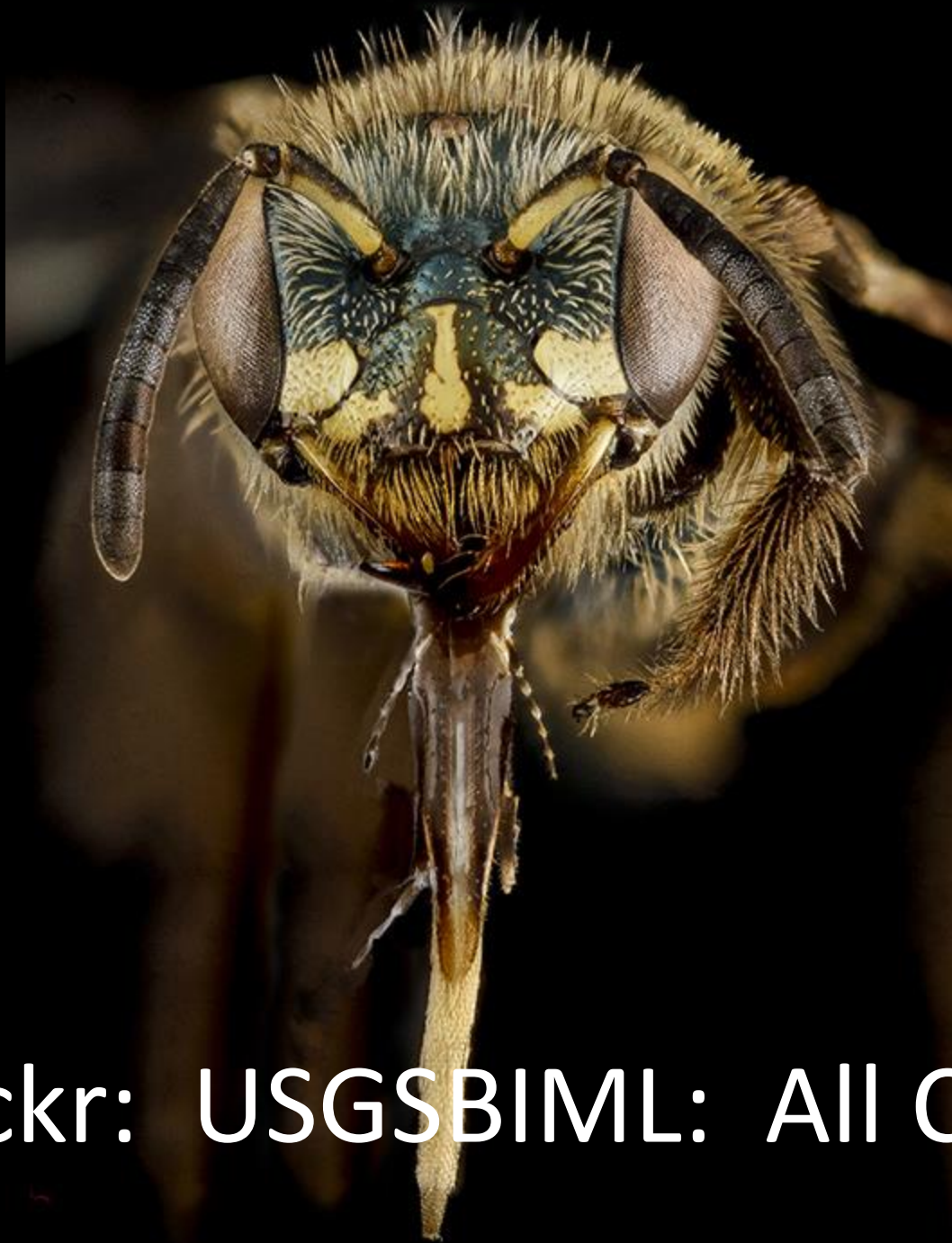




# Pile of Dirt







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20,000 Species Worldwide





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